

B1 (D) a rigid free swinging eccentric weight mounted on said exciter shaft so as to rotate as a unit with respect to said exciter shaft between 1) a first angular position in which the eccentricity of said rigid free swinging eccentric weight adds to the eccentricity of said fixed eccentric weight and 2) a second angular position in which the eccentricity of said rigid free swinging eccentric weight detracts from the eccentricity of said fixed eccentric weight, wherein said rigid free swinging eccentric weight is mounted on said exciter shaft so as to be restrained from substantial axial movement along said exciter shaft without the use of any retaining structure that is fixed to said rigid free swinging eccentric weight, and wherein said rigid free swinging eccentric weight is disposed between an axial end of said fixed eccentric weight and another component of said exciter assembly that is fixed to said exciter shaft, and wherein said rigid free swinging weight is restrained from substantial axial movement along said exciter shaft solely by said fixed eccentric weight and said another component of said exciter assembly.

8 A. (Amended) An exciter assembly for a vibratory roller, comprising:

- B2
- (A) an exciter housing;
 - (B) an exciter shaft rotatably journaled in said exciter housing;
 - (C) a fixed eccentric weight rotationally fixed to said exciter shaft;
 - (D) a rigid free swinging eccentric weight mounted on said exciter shaft so as to rotate as a unit with respect to said exciter shaft between 1) a first angular position in which the eccentricity of said rigid free swinging eccentric weight adds to the eccentricity of said fixed eccentric weight and 2) a second angular position in which the eccentricity

of said rigid free swinging eccentric weight detracts from the eccentricity of said fixed eccentric weight, wherein said rigid free swinging eccentric weight is mounted on said exciter shaft so as to be restrained from substantial axial movement along said exciter shaft without the use of any retaining structure that is fixed to said rigid free swinging eccentric weight,

B²
wherein said free swinging eccentric weight is sandwiched between a first end of said fixed eccentric weight and a component comprising one of a torque transfer element and a bearing that is axially spaced from said fixed eccentric weight, and

wherein said free swinging eccentric weight has a tab that extends over an adjacent axial end of said fixed eccentric weight and that engages a first side of said fixed eccentric weight when said free swinging eccentric weight is in said first angular position and that engages a second side of said fixed eccentric weight when said free swinging eccentric weight is in said second angular position.

12. (Twice Amended) An exciter assembly that is configured to impart vibrations to a rotating drum assembly of a vibratory roller, comprising:

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(A) an exciter housing which is formed integrally with an axle housing of the rotating drum assembly;

(B) an exciter shaft which is rotatably journaled in said exciter housing by at least first and second bearings;

(C) a fixed eccentric weight which is rotationally fixed to said exciter shaft;

B³

(D) a first free swinging eccentric weight which is sandwiched between a first end of said fixed eccentric weight and said first bearing and which is restrained from substantial axial movement along said exciter shaft solely by said fixed eccentric weight and said first bearing;

(E) a second free swinging eccentric weight 1) which is sandwiched between a second end of said fixed eccentric weight and a component consisting of a) said second bearing and b) a torque transfer element fixed to said exciter shaft and 2) which is restrained from substantial axial movement along said exciter shaft solely by said fixed eccentric weight and said component.

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~~25.~~ (Amended) The method as recited in claim 20, wherein at least some of the fixing steps comprise pressing the associated components onto said exciter shaft.

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~~26.~~ (Twice Amended) The method as recited in claim 20, wherein the step of fixing said fixed eccentric weight to said exciter shaft comprises forming said fixed eccentric weight integrally with said exciter shaft.

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~~27.~~ (Twice Amended) A method comprising:

(A) assembling an exciter assembly by

- (1) fixing a torque transfer element and a bearing to an exciter shaft,
- (2) fixing an eccentric weight to said exciter shaft,

(3) mounting first and second free swinging eccentric weights on said exciter shaft adjacent respective ends of said fixed eccentric weight so as to be rotatable a limited amount relative to said exciter shaft, and

(4) restraining said first and second free swinging eccentric weights from substantial axial movement along said exciter shaft solely by sandwiching said first and second free swinging eccentric weights between respective ends of said fixed eccentric weight and operative components of said exciter assembly, each of said operative components comprising one of said bearing and said torque transfer element; then

(B) inserting said exciter assembly axially into an opening in an exciter housing and mounting said exciter assembly in said exciter housing;

(C) mounting said exciter assembly on a trench roller in operative communication with a rotatable drum assembly that supports said trench roller on a surface to be compacted.

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~~31.~~ (Amended) An exciter assembly for a vibratory roller, comprising:

- (A) an exciter housing;
- (B) an exciter shaft rotatably journaled in said exciter housing;
- (C) a fixed eccentric weight rotationally fixed to said exciter shaft;
- (D) a rigid free swinging eccentric weight mounted on said exciter shaft so as to rotate as a unit with respect to said exciter shaft between 1) a first angular position in which the eccentricity of said rigid free swinging eccentric weight adds to the eccentricity